



P.B.5818 - Patentlaan 2
2280 HV Rijswijk (ZH)
☎ +31 70 340 2040
TX 31651 epo nl
FAX +31 70 340 3016

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Grünecker, Kinkeldey,
Stockmair & Schwanhäusser
Anwaltssozietät
Maximilianstrasse 58
80538 München
ALLEMAGNE

GRÜNECKER, KINKELDEY, STOCKMAIR
& SCHWANHÄUSSER
ANWALTSSOZietät
10. Sep. 2001
FRIST
TERM
EINGANG - RECEIVED

Datum/Date
10.09.01

Zeichen/Ref./Réf.
EP21617-009/iw ✓

Anmeldung Nr./Application No./Demande n°/Patent Nr./Patent No./Brevet n°.
01114274.2-2119- ✓

Anmelder/Applicant/Demandeur/Patentinhaber/Proprietor/Titulaire
Japan Storage Battery Company Limited ✓

COMMUNICATION

The European Patent Office herewith transmits as an enclosure the European search report for the above-mentioned European patent application.

If applicable, copies of the documents cited in the European search report are attached.

☒ Additional set(s) of copies of the documents cited in the European search report is (are) enclosed as well.

The following specifications given by the applicant have been approved by the Search Division:

☐ abstract

☒ title

☒ The abstract was modified by the Search Division and the definitive text is attached to this communication.

The following figure will be published together with the abstract:

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REFUND OF THE SEARCH FEE

If applicable under Article 10 Rules relating to fees, a separate communication from the Receiving Section on the refund of the search fee will be sent later.





DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.CI.7)
① A✓	HAYASHIBARA M ET AL: "Lithiation characteristics of FeV04" SOLID STATE IONICS, NORTH HOLLAND PUB. COMPANY. AMSTERDAM, NL, vol. 98, no. 1-2, 1 June 1997 (1997-06-01), pages 119-125, XP004126138 ISSN: 0167-2738 * page 120, left-hand column, paragraph 4 * * figure 2 *	1,2	H01M4/48
② A✓	US 5 336 572 A (KOKSBANG RENE) 9 August 1994 (1994-08-09) * column 1, line 45 - line 56 * * column 2, line 26 - line 39 * * column 3, line 36 - column 5, line 26 * * claims 1-8,15-21 *	1-10	
③ A✓	SAIDI M Y ET AL: "Investigation of the electrochemical properties of FexV205" SOLID STATE IONICS, NORTH HOLLAND PUB. COMPANY. AMSTERDAM, NL, vol. 82, no. 3, 1 December 1995 (1995-12-01), pages 203-207, XP004050222 ISSN: 0167-2738 * page 204, left-hand column, paragraphs 2,3 * * figure 3 *	2,3,7,8	TECHNICAL FIELDS SEARCHED (Int.CI.7) H01M
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 27 August 2001	Examiner Métais, S
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			



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EUROPEAN SEARCH REPORT

Application Number
EP 01 11 4274

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DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
D, A ✓	SUGUWARA M. AND AL.: "Amorphous iron orthovanadate as cathode active materials for rechargeable lithium cells" DENKI KAGAKU, vol. 61, no. 2, February 1993 (1993-02), pages 224-227, XP001023024 * page 224, right-hand column, paragraph 1 - left-hand column, paragraph 1 * * figure 2 * -----	1,2,7	
			TECHNICAL FIELDS SEARCHED (Int.Cl.7)
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 27 August 2001	Examiner Métais, S
<div>CATEGORY OF CITED DOCUMENTS</div> <div><div>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</div><div>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons ----- & : member of the same patent family, corresponding document</div></div>			

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EPO FORM 1503 03 82 (P04C01)

ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.

EP 01 11 4274

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
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27-08-2001

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 5336572 A	09-08-1994	AU 7104594 A WO 9429913 A	03-01-1995 22-12-1994



ABSTRACT / ZUSAMMENFASSUNG / ABREGE

01114274.2

The positive active material for secondary battery according to the invention comprises O, Fe in an amount of higher than 25% by weight, and V in an amount of from higher than 0% = 4% by weight to less than 35% by weight. The positive active material, when it is free of lithium, exhibits the following main peaks by the X-ray diffractometry using $\text{CuK}\alpha$ rays: a peak within a 2θ range of from greater than 26° to less than 29° and a peak within a 2θ range of from greater than 29° to less than 32° . The non-aqueous secondary battery having a positive electrode comprising this positive active material exhibits a high capacity and good cycle life performance and is inexpensive and environmentally friendly.